



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#24
163

In re Patent Application of

ARAS

Atty. Ref.: 888-29

Serial No. 09/331,756

Group: 2711

Filed: August 23, 1999

Examiner: H. Tran

For: TELEVISION BROADCAST SYSTEM AND METHOD

* * * * *

December 23, 2002

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

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Technology Center 2800

APPEAL BRIEF

Appellant hereby appeals the Final Rejection of May 8, 2002.

REAL PARTY IN INTEREST

The real party in interest is Appellant, Mehmet R. Aras.

RELATED APPEALS AND INTERFERENCES

The Appellant and the undersigned are not aware of any related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF THE CLAIMS

Claims 38-59 remain pending in this application. Claims 38-59 stand rejected by the Examiner, the rejections of which are appealed. All of the claims are presented in the Appendix to this Brief.

**STATUS OF ANY AMENDMENT FILED
SUBSEQUENT TO ANY FINAL REJECTION**

No amendments have been filed subsequent to the Final Rejection.

CONCISE EXPLANATION OF THE INVENTION

Appellant's invention is directed to a method and apparatus for remote control of a distributed television broadcasting system from a central site. Besides "global" broadcast programming downloaded to distributed broadcast transmitter sites, the central site also downloads control signals and alternate program data to the various remote sites. A bi-directional digital signal communication link is also used as a part of an error correction loop and/or control loop. The remote control includes an ability to interrupt standard "global" broadcast re-transmissions while transmitting a respectively corresponding alternate program that has been locally generated from the downloaded control signals and/or alternate program data. Alternatively, the remote control may simply overlay or otherwise composite alternate program signals locally generated from the downloaded control signals and/or alternate program data onto the global broadcast re-transmissions. The dependent claims add yet further details to Appellant's claimed inventions.

CONCISE EXPLANATION OF THE ISSUES PRESENTED FOR REVIEW

Whether claims 38-41, 44, 47-49, 51, 53 and 56-59 are anticipated under 35 U.S.C. § 102(b) as being unpatentable by Nemirofsky (U.S. Pat. No. 5,412,416).

Whether claims 42 and 50 would have been "obvious" under 35 U.S.C. §103 at the time of their invention based on Nemirofsky in view of Seth-Smith et al. (U.S. Pat. No. 4,829,569).

Whether claims 43, 45, 46, 52 and 54-55 would have been "obvious" under 35 U.S.C. §103 at the time of their invention based on Nemirofsky in view of Harvey et al. (U.S. Pat. No. 4,694,490).

WHETHER THE CLAIMS STAND OR FALL TOGETHER

Claims 38-41, 44, 47-49, 51, 53 and 56-59 stand or fall together and do not stand or fall with any other claims. Claims 42 and 50 stand or fall together and do not stand or fall with any other claims. Claims 43, 45, 46, 52 and 54-55 stand or fall together and do not stand or fall with any other claims.

ARGUMENTS WITH RESPECT TO THE ISSUES PRESENTED FOR REVIEW

Rejections under 35 U.S.C. 102

The Examiner's Office Action has improperly rejected claims 38-41, 44, 47-49, 51, 53 and 56-59 as being anticipated under 35 U.S.C. 102(b) by U.S. Patent No. 5,412,416 to Nemirofsky ("Nemirofsky").

Under 35 U.S.C. §102, a patent claim is invalid if it is anticipated by a single prior art reference. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995). To anticipate a patent claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently. *In Re Schreiber*, 128 F.2d 1473, 1477 (Fed. Cir. 1997).

Alphanumeric characters and/or other image data unique to particular subset(s) of the remote sites is otherwise transmitted by Appellant's invention (e.g., a digital data communication link with error correction) to respectively corresponding remote stations. In response to command codes broadcast to all remote sites via a non-displayed portion of the broadcast television signal, each remote site can be controlled to itself locally convert earlier received alphanumeric characters and/or image data to local visual material that is then locally overlaid synchronously onto a continuing general broadcast television signal. The success or failure of these local remote activities is subsequently reported back to the central site.

By contrast, Nemirofsky distributes plural video segments and control signals over separate channels and then re-assembles them locally to generate a locally customized composite video signal. There is no overlaying of locally generated alphanumeric/graphic vision materials onto a continuing un-interrupted broadcast television signal. It is literally impossible for Nemirofsky to anticipate even claim 38 – let alone more detailed claims. For example, see claim 41 which requires command codes to be transmitted by use of a vertical blanking interval and/or hex numbered pages of teletext transmission. There is simply no conceivable teaching of this in Nemirofsky.

Nemirofsky provides a distribution network for full motion video media, usually in the form of advertisements, allowing video programs to be transmitted from a distribution center (DC) to a multitude of receiving sites (RS), typically retail stores, dispersed over a wide geographic area. Television monitors (14) located at selected points in the receiving sites display the programs to an audience (shoppers in the course of shopping). Specifically, Nemirofsky provides for "customizing" video programs for particular target audiences or markets, such that the series of programs played in one receiving site could be quite different from that played in another. The distribution network provides automatic insertion of custom, store-specific video segments (22) into a general, network-wide video program (20) without the need for operational involvement of personnel at the receiving site (RS) through the use of control data encoded into the video signal at the distribution center (DC). An insertion control unit (56) at each receiving site (RS) reads the control data and switches a receiver (54) among channels carrying the network-wide program (20) and market specific segments (22) according to the control data.

The present invention as in claim 38 relates to a TV broadcast method for a system operated from a TV continuity studio..., comprising , *inter-alia*, the steps of

(i) *generating alphanumeric characters and/or image data separately for each of plural remote sites at a central site and transmitting the alphanumeric characters and/or image data to the plural remote sites via a digital data communication link;*

(ii) *detecting whether the alphanumeric characters and/or image data have been received correctly at the remote sites via the link;*

(iii) generating and transmitting command codes within *non-displayed portions of broadcast television signals...*;

(iv) *converting the alphanumeric characters and/or image data to local vision materials with a graphic generator at each of the remote sites;*

(v) *at each remote site, overlaying the local vision material synchronously onto the continuing general television signal without cutting off the main general broadcast;*
and

(vi) *detecting whether the local vision materials have been broadcast via transmission of digital information sent back to the central site.*

Nemirofsky is not related to a TV broadcast system and method. Instead, it relates to a video media distribution network apparatus and method where programs can be only viewed in the particular chains of stores where they are delivered. On the other hand, the system of the claimed invention can be viewed as long as the viewers tune to the TV station to which the system units are coupled, and the system operates during TV broadcasts from a TV continuity studio. The distribution center of Nemirofsky is not located within a TV continuity studio, and therefore, the broadcast flow unit of the claimed invention is not found in Nemirofsky to operate its distribution center. Thus, at least for these reasons alone, there can be no anticipation as every element of the claim is not identical.

Moreover, in Nemirofsky, the market specific segments are transmitted to each of a plurality of receiving sites from the distribution center. The market specific segments (promotional advertisements, commercial advertising, sports, news, etc.) are received in the distribution center and then merely transmitted to a plurality of receiving sites –

there is no generation of promotional advertisements, etc. in the distribution center.

Nemirofsky fails to teach or suggest "generating alphanumeric characters and/or image data ...at a central site..." as recited in claim 38 of the present invention. Figure 2 and the related disclosure on pages 6-7 of the present specification provide support to this claimed feature.

At page 2 of the Office Action, with respect to claim 38, the Examiner disputes Appellant's contention that Nemirofsky is not related to a TV broadcast system and method. In disputing Appellant's contention the Examiner states that Figure 1 of the cited reference discloses a TV broadcast system. To the contrary, the description in the cited reference at column 4, lines 5-6 describes Figure 1 as a "block diagram of the video distribution network of the present invention." (emphasis added) Thus, contrary to the Examiner's assertion, the cited reference itself states that Nemirofsky is not a TV broadcast system and method.

Indeed, the fifteenth edition of "Newton's Telecom Dictionary" defines the terms TV and broadcast as, *inter alia*,

In the less intelligent world of "broadcast media," a local TV or radio station might use a terrestrial antenna or a satellite system to transmit information from a single source to any TV set or radio capable of receiving the signal within the area of coverage.

Nemirofsky's system simply does not meet this definition of a TV broadcast system. Instead, Nemirofsky relates to a video media distribution network apparatus and method where programs can be only viewed in the particular chains of stores where they are delivered. On the other hand, the system disclosed and claimed in independent claims 38, 47 and 56-59 can be viewed as long as the viewers tune to the TV station to which the system units are coupled, and the system operates during TV broadcasts from a TV

continuity studio. The distribution center of Nemirofsky is not located within a TV continuity studio, and therefore, the broadcast flow unit of the claimed invention is not found in Nemirofsky to operate its distribution center. Thus, at least for these reasons alone, there can be no anticipation as every element of the claim is not identical.

Moreover, the video distribution network of Nemirofsky is defined by "Newton's Telecom Dictionary" in its definition for video networking, *inter alia*, as

Video networking is really an architecture that supports a range of business applications featuring video communications. These applications can be deployed over the video network to span the LAN and WAN environments. Furthermore, if the video network is deployed properly, it can provide a consolidated (data, voice and video) WAN access solution across the enterprise.

Thus, video networks are clearly much more restricted in scope and in broadcast capabilities as compared to TV broadcast systems and are clearly different technologies as pointed out by Newton's Telecom Dictionary.

In the present invention as in claim 38, methods and components characterizing images that are overlaid on the main television broadcast image are presented as alphanumeric characters and or/image data, and therefore there is a need for the step of converting the alphanumeric characters and/or image data to local vision materials These steps of transmitting information which characterizes the broadcasts and then converts the characterized information to local vision materials is neither disclosed nor suggested by Nemirofsky.

Even if Nemirofsky's distribution center is considered as a "central site" for argument sake, since Nemirofsky receives market segment data directly in the form of advertisements, news, sports, etc. and merely forwards them to a plurality of remote sites, there appears to be no generation of alphanumeric characters and/or image data

at the central site. Since Nemirofsky does not generate alphanumeric characters and/or image data the central site, it is logical to conclude that it fails to detect "whether the alphanumeric characters and/or image data have been received correctly at the remote sites via the digital communication link." Therefore, for at least this reason alone, the claimed invention is not anticipated by Nemirofsky, and therefore is patentably distinct over prior art of record. Appellant, therefore, respectfully requests that the rejection of claim 38 and its dependent claims be withdrawn and that they be passed to allowance.

Further, claim 38 requires "generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of the remote sites from the central site." Nemirofsky simply does not involve transmitting any auxiliary information within non-displayed portions (e.g., VBI) of broadcast television signals. Furthermore, the Nemirofsky "control data" sent on another separate channel are not even comparable to the command codes of applicant's rejected claims.

In this regard, Appellant respectfully submits that the Examiner failed to note the difference between the control codes of Nemirofsky and the alphanumeric characters and/or image data of the claimed invention (which, like Nemirofsky's control data is sent over a separate channel). The control data of Nemirofsky et al. contain the control commands for the operation of its own units, whereas the Appellant's alphanumeric characters and/or image data contain data characterizing the material to be displayed by the remote receiving sites (that will be overlaid on the continuing general broadcast of a particular TV station) in the forms of subtitles, frames, and graphic animations.

Specifically, col. 6, lines 46 + of Nemirofsky disclose that "...in analog embodiment, an uplink modulator 40 receives the network wide program and market-

specific segment signals and modulates them to a frequency appropriate for satellite transmission.... Encoder/modulator 40 transfer the network wide program 20 onto one digital source channel, while the market-specific segments are transferred onto one or more additional digital source channels. Preferably, a digital source channel separate from those used for the network-wide program 20 and market specific segments is reserved for control data. See col. 7, lines 1-10 of Nemirofsky. Thus, the network-wide programs, the market specific programs and the control data are each transmitted on different communication channels, while claim 38 of the present invention requires that the control data be transmitted in non-displayed portions of broadcast television signals, i.e., within the same channel. The disclosure at least on page 8, lines 15-40, page 9, lines 1-10 of the present specification provides further support to this claimed feature. Thus, there can be no anticipation.

Furthermore, claim 38 of the present invention requires "converting the alphanumeric characters and/or image data to local vision materials with a graphic generator at each of the remote sites." Col. 11, lines 4-12 of Nemirofsky fails to teach or suggest this limitation. Specifically, Nemirofsky requires that "...each unique program channel occupies a discrete portion of the transmission signal, and remain identifiable. Televisions 80 in the receiving site are tuned to receive the cable transmission channel, and may be switched to display a particular cable program channel among those transmitted over the transmission channel." Thus, Nemirofsky does nothing more than conventional switching from one channel to another by tuning to a specific channel. Appellant respectfully submits that it is not clear as to how this portion of Nemirofsky is allegedly being applied to the recitations of claim 38 of the present invention. In view of

the above, Appellant respectfully submits that claim 38 is neither anticipated nor rendered obvious over prior art of record.

Also, claim 38 of the present invention requires "*at each remote site, overlaying the local vision material synchronously onto television broadcast signals without cutting off the television broadcast signals*". The Office Action asserts that col. 11, lines 13-63 of Nemirofsky teaches the above recited feature. Appellant respectfully disagrees. Col. 11, lines 11-45 merely discloses reassembling market specific segments to suit individual retail chains, stores, etc. Nemirofsky provides for customizing video programs for particular target audiences or markets, such that the series of programs played in one receiving site could be quite different from that played in another location. The distribution network provides automatic insertion of custom, store-specific video segments (22) into a general, network-wide video program (20).... The insertion control unit (56) at each receiving site (RS) reads the control data and switches a receiver (54) among channels carrying the network-wide program and market specific segments according to the control data. See the Abstract. Col. 11, lines 13-63 further extrapolate this concept. The following example is provided to further clarify this point recited in claim 38 of the present invention:

Assume that viewers of a particular TV channel can watch different messages in different local units, during the continuing broadcast. In other words, viewers in Washington DC view an administrative announcement, concerning Washington DC only (this message is broadcast in Washington DC only); while viewers of the same channel, in New York City, at the same time view an administrative announcement, concerning New York City only (this message is broadcast in New York City only) on the same TV channel, while watching a particular program, by means of subtitles, graphics, animation, and frames, on a specific area of the screen upon continuing broadcast, without cutting the main broadcast.

However, in Nemirofsky, the network-wide program is interrupted/cut upon selecting a market specific segment, and therefore, there is no overlay of local vision material synchronously onto the continuing general television signals without cutting off the main general broadcast as required by claim 38 of the present invention. Since Nemirofsky interrupts/cuts off the network-wide program which is further evident in view of the switching the receiver 54 among channels so as to select the market specific segment instead of the network-wide program, Nemirofsky teaches away from the present invention as in claim 38. Therefore, Nemirofsky does not anticipate the claimed invention. In view of the above, Appellant respectfully urges that the rejection of claim 38 and its dependent claims (39-46) be reversed on this appeal and that they be passed to allowance.

The arguments as above with respect to claim 38 are equally applicable to claim 47. Therefore, Appellant respectfully submits that claim 47 and its dependent claims are also allowable. New claims 56-59 include limitations recited in claim 38 and are therefore in condition for allowance.

The Examiner also argues in the Office Action, at page 2, that Nemirofsky "generates alphanumeric characters and/or image data at a central site" because it discloses a logo generator. Suffice it to say, that the cited reference's disclosure of a logo generator does not constitute the generation of alphanumeric characters and/or image data, as disclosed and claimed in the present application.

Indeed, at page 3 of the Office Action, the Examiner contradicts himself when he claims that Nemirofsky detects whether the alphanumeric characters and/or image data have been received correctly at the remote sites by virtue of the disclosure of the data

receiver and message task described at column 9, lines 53-57 and column 16, lines 7-36 of the cited reference. If the Examiner's prior statement that the logo generator constitutes the generation of alphanumeric characters and/or image data is correct, then it follows that the cited reference must have a method or means for detecting whether the logo has been correctly received if it is to meet the "detecting" limitation of the independent claims. Needless to say, no such way or means is disclosed, or even suggested, anywhere in the cited reference.

Thus, even if the Examiner's assertion that logo generation constitutes Appellant's claimed generation of alphanumeric data is correct, which Appellant does not concede, then the cited reference fails to teach or suggest Appellant's claimed feature of detecting the accuracy of the alphanumeric data.

Since the cited Nemirofsky reference does not teach or suggest the above described features of claim 38, claim 38 is believed to patentably define thereover. In addition, since these same features are present in all of independent claims 47, 56, 57, 58 and 59, these claims are also believed to patentably define over the cited reference. Moreover, the secondary references relied upon by the Examiner do not solve the deficiencies noted above with respect to Nemirofsky and, accordingly, all of the claims standing in the present case are believed to patentably define over all of the cited art taken either singly or in combination. More particularly, all of these claims are believed to patentably define over Nemirofsky which, as noted above, does not disclose every limitation of the claims.

Rejections under 35 U.S.C. 103

The Examiner improperly rejected claims 42 and 50 under 35 U.S.C. 103(a) as being unpatentable over Nemirofsky in view of U.S. Patent No. 4,829,569 to Seth-Smith ("Seth-Smith").

Under 35 U.S.C. §103, a patent claim is invalid if the differences between its subject matter and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *Litton Systems Inc. v. Honeywell Inc.*, 87 F.3d 1559, 1566 (Fed. Cir. 1996). Prior art is relevant to a determination of obviousness if it falls within the inventor's field of endeavor, or if it is reasonably pertinent to the problem facing the inventor. *In re GPAC Inc.*, 57 F.3d 1573, 1577-78 (Fed. Cir. 1995). Prior art references can be combined to render an invention obvious only if there is some suggestion, either in the references themselves or in the knowledge generally available to one skilled in the art, to combine them. *Motorola Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461, 1472 (Fed. Cir. 1997).

Claim 42 depends from independent claim 38 and claim 50 depends from independent claim 47. Claims 42 and 50 require added limitations of *inter-alia* decoding of teletext. The Examiner alleges this would be similar to Nemirofsky's alleged decoding of commands received via the VBI...citing to Nemirofsky's Figure 3, host computer 70 and col. 10, lines 45-58. However, the undersigned can not find any such alleged features at the cited portions of Nemirofsky. Where, for example, is the VBI even mention at col. 10, lines 45-58?

The Examiner's attempt to modify Nemirofsky with Seth-Smith is also clearly erroneous merely because Nemirofsky could have done things differently does not constitute any suggestion or motivation to do so. The Examiner's attempt to use hindsight to support a manufactured after the fact suggestion is simply inappropriate.

The Examiner also improperly rejected claims 43, 45, 46, 52 and 54-55 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nemirofsky in view of U.S. Patent No. 4,694,490 to Harvey ("Harvey"). Claims 43, 45, 46 depend from independent claim 38 and claims 52, 54-55 depend from independent claim 47. Claims 43 and 52 require added limitations of *inter-alia* command codes from the central managing and controlling site act to control functions, switches between general or..., reports of a control process...; starts, stops, differentiation of one or more process, and the Office Action alleges that this would be similar to Nemirofsky's disclosure of performing multiple tasks. Appellant respectfully disagrees.

As noted above with respect to claim 38, Appellant has clearly set forth that Nemirofsky fails to teach or suggest all the requirements of claim 38 of the present invention. Harvey fails to teach or suggest what is missing from Nemirofsky. Harvey relates to an apparatus and method for automatically controlling programming transmission and monitoring the programming transmitted and presented. Neither Nemirofsky nor Harvey alone or in combination, teach or suggest all the requirements of claim 38.

Claim 43 adds further limitations to claim 38. As in claim 43 of the present invention, the switching between general or differential transmission to a corresponding broadcast area from a storage medium for still or moving character and/or image data to

display producing area in a remote site is performing by taking the alphanumeric characters and/or image data from the storage area and bringing them to the broadcast are for display. It is not possible for Nemirofsky to have such a function at the remote site unit as it does not produce subtitles, frames, graphic animations, etc. to be overlaid with a general broadcast signal. The system of Nemirofsky switches between the transmission channels that carry full motion media to be displayed in the retail stores, etc.

Furthermore, since the central site in Nemirofsky is not even in the TV continuity studio of a TV broadcast station, it appears that the control processes are handled differently. Although Nemirofsky discloses performing multiple tasks, those tasks are performed to control it's own insertion control unit which is neither found nor needed by the claimed invention. Also, Harvey merely discloses that it's data recorders are adapted to output data to remote sites on predetermined instructions, and that the methods coordinate and instruct equipment in the transmission and presentation of radio and television programming.... There is no teaching or suggestion that the control codes are transmitted within non-displayed portions of broadcast television signals to remotely control each of the remote sites from a central site, and that the control codes are used to start, stop, differentiate one or more process as required by claim 43 of the present invention.

Merely stating that it would have been obvious to one skilled in the art to modify Nemirofsky with the teachings of Harvey does not meet the requirements of obviousness as there must be some suggestion of motivation for the modification of the references. Even assuming *arguendo* that it would have been obvious to a person of

ordinary skill in the art that Nemirofsky may be modified by integrating predetermined instruction in the control data, as taught by Harvey, so that "broadcast transmission facility can duplicate the operation of a television studio..." does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.

Claims 45-46 depend from claim 38 and further limit claim 38 in a patentable sense. Since Nemirofsky fails to teach or suggest all the requirements of claim 38 and Harvey et al. does not solve the deficiencies of Nemirofsky, claims 45-46 which further limit claim 38 are deemed to be allowable. Likewise, claims 52, 54-55 depend from independent claim 47. Neither Nemirofsky nor Harvey, alone or in combination, teach or suggest all the requirements of independent claim 47. Therefore, claims 52 and 54-55 further limit claim 47 in a patentable sense and are therefore allowable. In view of the above, Appellant respectfully requests that the rejection of claims 43, 45-46, 52 and 54-55 be reversed on this appeal and that they be passed to allowance.

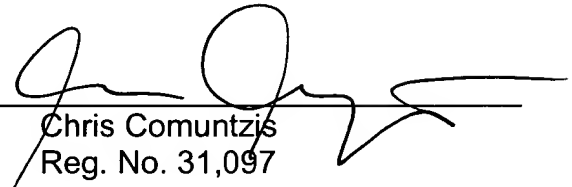
CONCLUSION

For all of the reasons set forth above, it is respectfully requested that this appeal be granted and that the rejections discussed above be reversed.

Respectfully submitted,

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APPENDIX OF CLAIMS ON APPEAL

38. A TV broadcast method for a system to be operated from a TV continuity studio within the control of a broadcast flow unit, said method comprising:

- (a) generating alphanumeric characters and/or image data separately for each of plural remote sites at a central site and transmitting said alphanumeric characters and/or image data therefrom to said plural remote sites via a digital data communication link;
- (b) detecting whether said alphanumeric characters and/or image data have been received correctly at the said remote sites via said link;
- (c) generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of said remote sites from the said central site;
- (d) converting said alphanumeric characters and/or image data to local vision materials with a graphic generator at each of said remote sites;
- (e) at each remote site, overlaying said local vision material synchronously onto the continuing general television signal without cutting off the main general broadcast; and
- (f) detecting whether the said local vision materials have been broadcast via transmission of digital information sent back to the central site.

39. A TV broadcast method as in claim 38 further including:

- (g) producing still or moving alphanumeric characters and/or image data at the central site continuity studio; and

(h) simultaneously transmitting the alphanumeric characters and/or image data to a selected number of said remote sites through a digital data communication link.

40. A TV broadcast method as in claim 38 further including:

(i) controlling and verifying whether the data present at the central site and sent to remote stations have been received correctly by using a modem.

41. A TV broadcast method as in claim 38 further including:

(g) generating and transmitting command codes within the broadcasting process, either automatically or semi-automatically under an operator's control, to remote sites by using the vertical blanking intervals and/or hex numbered pages of the teletext transmission.

42. A TV broadcast method as in claim 38 wherein a decoder at each remote site extracts, decodes, and transfers commands coming through teletext to a remote site computer.

43. A television broadcast method as in claim 38 wherein said command codes from the central managing and controlling site act to control:

(a) functions,
(b) switches between general or differentiated transmissions to a corresponding broadcast area from a storage medium for still or moving character and/or image data to a display producing area in a remote site,

- (c) reports of a control process to a central site continuity studio; and
- (d) starts, stops, differentiation of one or more process.

44. A TV broadcast method as in claim 38 wherein:

(g) said alphanumeric character and/or image data sent from the central site are converted at the remote site to local vision materials as subtitles, graphics, footer, frame, or animation using a graphical generator, decoder, inserter, hard disk and CD-ROM, recorder/reader.

45. A TV broadcast method as in claim 38 wherein hardware at each remote site controls:

- (a) actual overlay of the said local vision materials;
- (b) signal levels from the satellite receiver; and
- (c) output from a cable head end and/or TV transmitter to be within acceptable pre-defined limits.

46. A TV broadcast method as in claim 38 further including:

(g) sending querying data about the operations at the remote site, error reports to the central continuity studio and, when desired, remote site operational information from the continuity studio through modem/telephone network and/or satellite data link.

47. (Amended) A TV broadcast system to be operated from a TV continuity studio within the control of a broadcast flow unit, said system comprising:

- (a) means for generating alphanumeric characters and/or image data separately for each of plural remote sites at a central site and transmitting said

alphanumeric characters and/or image data therefrom to said plural remote sites via a digital data communication link;

(b) means for detecting whether said alphanumeric characters and/or image data have been received correctly at the said remote sites via said link;

(c) means for generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of said remote sites from the said central site;

(d) means for converting said alphanumeric characters and/or image data to local vision materials with a graphic generator at each of said remote sites;

(e) means for at each remote site, overlaying said local vision material synchronously onto the continuing general television signal without cutting off the main general broadcast; and

(f) means for detecting whether the said local vision materials have been broadcast via transmission of digital information sent back to the central site.

48. (Amended) A TV broadcast system as in claim 47 further including:

(g) means for producing still or moving alphanumeric characters and/or image data at the central site continuity studio; and

(h) means for simultaneously transmitting the alphanumeric characters and/or image data to a selected number of said remote sites through a digital data communication link.

49. (Amended) A TV broadcast system as in claim 47 further including:

(g) means for controlling and verifying whether the data present at the central site and sent to remote stations have been received correctly by using a modem.

50. A TV broadcast method as in claim 38 wherein a decoder at each remote site extracts, decodes, and transfers commands coming through teletext to a remote site computer.

51. A TV broadcast method as in claim 38 further including:

(g) generating and transmitting command codes within the broadcasting process, either automatically or semi-automatically under an operator's control, to remote sites by using the vertical blanking intervals and/or hex numbered pages of the teletext transmission.

52. A television broadcast method as in claim 38 wherein said command codes from the central managing and controlling site act to control:

- (a) functions,
- (b) switches between general or differentiated transmissions to a corresponding broadcast area from a storage medium for still or moving character and/or image data to a display producing area in a remote site,
- (c) reports of a control process to a central site continuity studio; and
- (d) starts, stops, differentiation of one or more process.

53. A TV broadcast method as in claim 38 wherein:

(g) said alphanumeric character and/or image data sent from the central site are converted at the remote site to local vision materials as subtitles, graphics, footer,

frame, or animation using a graphical generator, decoder, inserter, hard disk and CD-ROM, recorder/reader.

54. A TV broadcast method as in claim 38 wherein hardware at each remote site controls:

- (a) actual overlay of the said local vision materials;
- (b) signal levels from the satellite receiver; and
- (c) output from a cable head end and/or TV transmitter to be within acceptable pre-defined limits.

55. A TV broadcast method as in claim 38 further including:

- (g) sending querying data about the operations at the remote site; error reports to the control continuity studio and, when desired, remote site operational information from the continuity studio through modem/telephone network and/or satellite data link.

56. A TV broadcast method for a system to be operated from a centralized TV broadcast facility, said method comprising:

- (a) generating alphanumeric characters and/or image data separately for each of plural remote sites at a central site and transmitting said alphanumeric characters and/or image data therefrom to said plural remote sites via a digital data communication link;
- (b) detecting whether said alphanumeric characters and/or image data have been received correctly at the said remote sites via said link;

- (c) transmitting broadcast television signals from the central site to each of said plural remote sites;
- (d) generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of said remote sites from the said central site;
- (e) converting said alphanumeric characters and/or image data to local vision materials with a graphic generator at each of said remote sites;
- (f) at each remote site, overlaying said local vision material synchronously onto the television broadcast signals without cutting off the television broadcast signals; and
- (g) detecting whether said local vision materials have been broadcast via transmission of digital information sent back to the central site.

57. A TV broadcast system to be operated from a centralized TV facility, said system comprising:

- (a) means for generating alphanumeric characters and/or image data separately for each of plural remote sites at a central site and transmitting said alphanumeric characters and/or image data therefrom to said plural remote sites via a digital data communication link;
- (b) means for detecting whether said alphanumeric characters and/or image data have been received correctly at the said remote sites via said link;
- (c) means for transmitting broadcast television signals from the central site to each of said plural remote sites;

(d) means for generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of said remote sites from the said central site;

(e) means for converting said alphanumeric characters and/or image data to local vision materials with a graphic generator at each of said remote sites;

(f) means, at each remote site, for overlaying said local vision material synchronously onto the television broadcast signals without cutting off the television broadcast signals; and

(g) means for detecting whether said local vision materials have been broadcast via transmission of digital information sent back to the central site.

58. A method of controlling each of a plurality of remote broadcast sites from a television studio, said method comprising:

(a) generating alphanumeric characters and/or image data separately for each of the remote broadcast sites at a central site and transmitting said alphanumeric characters and/or image data therefrom to said plural remote broadcast sites via a digital data communication link;

(b) detecting whether said alphanumeric characters and/or image data have been received correctly at the remote broadcast sites via said link;

(c) transmitting broadcast television signals from the central site to each of said plural remote broadcast sites;

(d) generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of said remote broadcast sites from the said central site;

(e) converting said alphanumeric characters and/or image data to local vision materials with a graphic generator at each of said remote sites;

(f) at each remote site, overlaying said local vision material synchronously onto the television broadcast signals without cutting off the television broadcast signals; and

(g) detecting whether the local vision materials have been broadcast via transmission of digital information sent back to the central site.

59. A system for controlling each of a plurality of remote broadcast sites from a television studio, said method comprising:

(a) means for generating alphanumeric characters and/or image data separately for each of the remote broadcast sites at a central site located within said television continuity studio, and transmitting said alphanumeric characters and/or image data from said central site to said plural remote broadcast sites via a digital data communication link;

(b) means for detecting whether said alphanumeric characters and/or image data have been received correctly at the remote broadcast sites via said link;

(c) means for transmitting broadcast television signals from the central site to each of said plural remote broadcast sites;

(d) means for generating and transmitting command codes within non-displayed portions of broadcast television signals to remotely control each of said remote broadcast sites from the said central site;

(e) means for converting said alphanumeric characters and/or image data to local vision materials with a graphic generator at each of said remote sites;

(f) means, at each remote site, for overlaying said local vision material synchronously onto the television broadcast signals without cutting off the television broadcast signals; and

(g) means for detecting whether the local vision materials have been broadcast via transmission of digital information sent back to the central site.